

COMPARATIVE ANALYSIS OF CONVENTIONAL METHOD WITH ACTIVITY BASED COSTING IN PT MULIA SEJATI GALLERY

Irma Nadia Erena¹; Engelwati Gani²

^{1,2}Accounting Department, Faculty of Economic and Communication, Bina Nusantara University
Jln. K.H. Syahdan No 9, Palmerah, Jakarta Barat, 11480
¹nadiaerene06@gmail.com; ²engelwatig@binus.ac.id

ABSTRACT

The goal of this research was to provide readers the information about the calculation methods, both traditional and activity-based costing in the application of the cost of production. The method used in this research was the qualitative method. The analysis was done by calculating the amount of the production cost using the traditional system and the magnitude of the production cost when using the activity-based costing system. The amount of each acquisition was then performed into data analysis. The results achieved are massive distortion between the calculations using traditional systems and activity based costing system. The conclusions of the whole thesis are activity-based costing system is considered more relevant than traditional systems that are currently used by the company.

Keywords: management accounting, activity based costing, conventional accounting

INTRODUCTION

Problem formulations in this research are the company's production process, calculation of the production cost that is carried out by the company, the calculation of the production cost when using activity based costing, the comparison between the two methods, and reconciliation. Figure 1 explains the activity in one company based on the cost.

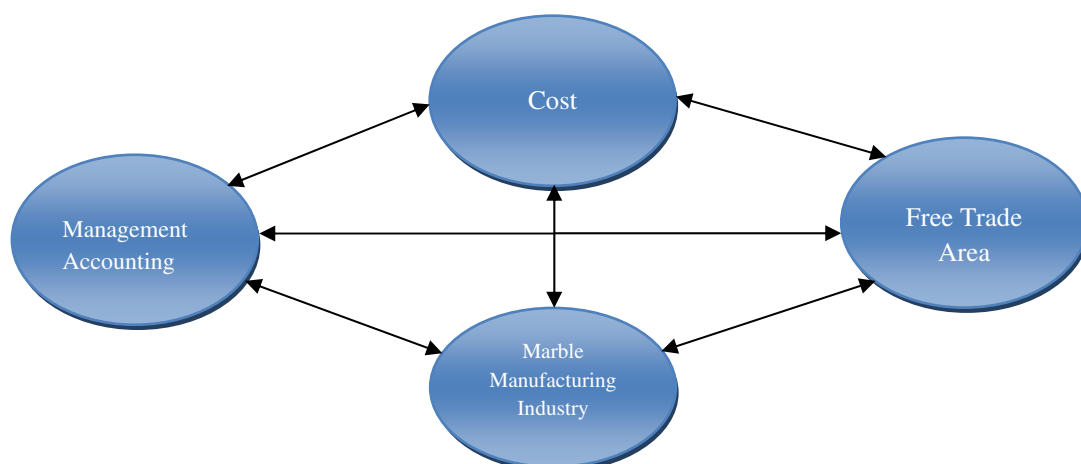


Figure 1 Activity Based Costing

The goals of this research are to know how to calculate the production cost of marble products that made by the company, the calculation of production cost if using activity-based costing system in the product that made from marble with the type of Common (Travertine and Empire Beige), Limited (Opera Vaticano and Golden Venatino), and Exotic (Statuario and Potoro Gold), and the difference in costs incurred both. Application of activity is based on costing in a textile company in Pakistan. The case study is an international journal that discussed the determination of activity-based costing system in a textile company in Pakistan. That journal is organized in Islamabad (capital of Pakistan) in 2013 which is made by Godil that discusses the implementation of the activity-based costing system in the textile industry. Research on this journal is performed to facilitate the public in setting the cost of production in the textile industry that is now starting to bloom in Pakistan. It produces the cost of production in the textile company that studies and shows the company wants to compete in price, determine the cost of production, as well as the advantages and disadvantages of this system which is really needed. According to Atkinson, et al., (2012) the description of the cost is as follows:

"The monetary value of goods or services issued to benefit present or future. Therefore, while the cost reflects the outflow of sources such as cash or financial commitment to pay in the future. The cash outflow brings benefits that can be used to make products that can be sold to generate a cash benefit ".

Carter (2009) has defined cost as an exchange, expenses, or sacrifices that are made to ensure the acquisition of the benefits. Dunia and Wasillah (2012) have suggested that the cost of production is the costs incurred in connection with manufacturing activities. The cost of production is divided into three broad categories, namely direct material, direct labor, and manufacturing overhead. While Hansen and Mowen (2007) have defined the traditional methods of calculating the production cost by cost charging function of direct materials and direct labor using direct search. Overhead costs, on the other hand, is charged by using a driving element and allocation. According to Garrison, Noreen, and Brewer (2013), in the traditional accounting, all expenses are charged to production costs even products cost that is not caused by products. For example, some wages for the security of the plant will be located on the product even though the wages of security guards is completely unaffected whether the firm produces or not.

Horngren, *et al.*, (2007) have defined the activity based costing by identifying individual activities as the fundamental cost objects. An activity is an event, task, or a unit of work with the specific purpose. It means that activity based costing is a purification system costs by identifying the individual activities as the fundamental cost objects and activities are undertaken in the form of an event, a task, or work unit with a specific goal. According to Garrison, Norren, Brewer (2013), it is activity based costing that method is designed to provide cost information for managers to strategic decision-making and other decisions that affect the capacity and fixed costs. Weygandt, Kimmel, Kieso (2010) have defined that activity based costing is a cost accounting system that focuses on the activities performed in the specific manufacturing a product that can be interpreted as activity based costing that system exists in cost accounting. It focuses on the activities conducted in the manufacturing process of a product.

METHODS

The method used is the qualitative method that uses primary data as a reference. Primary data is obtained directly from the company related to the documents concerning production processes and documents relating to the calculation of the cost of production that carried out by the company and other supporting documents on the website of the company. The collection method to obtain these data is carried out as follows (1) Library research by collecting the required information or data related to

the topics discussed. (2) Field research by conducts researches to obtain information directly by visiting the company. Field research can be done by observation, interview, and re-performance.

RESULTS AND DISCUSSIONS

Figure 2 shows the production process within the company. It can be seen that the process consists of three stages, namely the initial stage, processing stage, and final stage.



Figure 2 Production Process

Table 1 shows the method calculation that is used by the company (traditional).

Table 1 Cost of Phone Bills, Water, Electricity and Property Tax in 2013

| Phone Bills Per Year | | | | | | |
|----------------------|--------------|----------------|-----------------|--------------|--------------|---------------|
| 24% | 21% | 17% | 15% | 13% | 10% | 100% |
| Travertine | Empire Beige | Opera Vaticano | Golden Venatino | Statuario | Potoro Gold | Total |
| Rp25.252.049 | Rp22.095.543 | Rp17.886.868 | Rp15.782.531 | Rp13.678.193 | Rp10.521.687 | Rp105.216.870 |

| Electricity Bill Per Year | | | | | | |
|---------------------------|---------------|----------------|-----------------|---------------|--------------|---------------|
| 24% | 21% | 17% | 15% | 13% | 10% | 100% |
| Travertine | Empire Beige | Opera Vaticano | Golden Venatino | Statuario | Potoro Gold | Total |
| Rp236.366.208 | Rp206.820.432 | Rp167.426.064 | Rp147.728.880 | Rp128.031.696 | Rp98.485.920 | Rp984.859.200 |

| Water Bill Per Year | | | | | | |
|---------------------|---------------|----------------|-----------------|--------------|--------------|---------------|
| 24% | 21% | 17% | 15% | 13% | 10% | 100% |
| Travertine | Empire Beige | Opera Vaticano | Golden Venatino | Statuario | Potoro Gold | Total |
| Rp125.702.592 | Rp109.989.768 | Rp89.039.336 | Rp78.564.120 | Rp68.088.904 | Rp52.376.080 | Rp523.760.800 |

| Property Tax Per Year | | | | | | |
|-----------------------|--------------|----------------|-----------------|-------------|-------------|--------------|
| 24% | 21% | 17% | 15% | 13% | 10% | 100% |
| Travertine | Empire Beige | Opera Vaticano | Golden Venatino | Statuario | Potoro Gold | Total |
| Rp3.228.000 | Rp2.824.500 | Rp2.286.500 | Rp2.017.500 | Rp1.748.500 | Rp1.345.000 | Rp13.450.000 |

The allocation of costs is charged by percentage of each product; that will be included in the calculation of factory overhead. It becomes the important thing to do, where company allocates detail costs which actually happen then charged to each product.

Table 2 Calculation of the Production Cost that is Used by the Company (Traditional)

| | Marble Cost Production | | | | | |
|---|-------------------------|-------------------------|-------------------------|-------------------------|------------------------|-------------------------|
| | Statuario | Potero Gold | Opera Vaticano | Golden Ventino | Travertine | Empire Beige |
| Direct Cost Production | | | | | | |
| Marble Cost Production | Rp9,782,690,080 | Rp10,987,655,700 | Rp9,876,549,500 | Rp10,712,675,770 | Rp9,234,957,000 | Rp10,563,004,500 |
| Import Taxes (Has Import Identification Number) | Rp244.567.252 | Rp274.691.393 | Rp246.913.738 | Rp267.816.894 | Rp230.873.925 | Rp264.075.113 |
| Total of Direct Raw Material | Rp10.027.257.332 | Rp11.262.347.093 | Rp10.123.463.238 | Rp10.980.492.664 | Rp9.465.830.925 | Rp10.827.079.613 |
| Direct Labor | | | | | | |
| Total of Direct Labor | Rp110.635.200 | Rp85.104.000 | Rp144.676.800 | Rp127.656.000 | Rp204.249.600 | Rp178.718.400 |
| Overhead Factory | | | | | | |
| Cost of Lab Marble | Rp58.216.400 | Rp62.111.900 | | | | |
| Indirect Raw Material: | | | | | | |
| Pigment | Rp33,218,450 | Rp39,867,800 | | | | |
| Netting | Rp50,916,812 | Rp49,800,350 | Rp52,711,980 | Rp50,867,400 | Rp54,927,450 | Rp51,254,800 |
| Eppoxy | Rp43,672,450 | Rp48,679,800 | Rp44,219,800 | Rp49,990,750 | Rp43,849,000 | Rp47,980,600 |
| Resin | Rp62,234,560 | Rp61,960,800 | Rp62,876,500 | Rp61,411,250 | Rp62,914,700 | Rp60,509,200 |
| Peeled Stone | Rp21,960,800 | Rp24,356,800 | Rp22,897,650 | Rp25,490,110 | Rp23,987,000 | Rp27,943,800 |
| Coating | Rp42,567,400 | Rp49,861,120 | Rp45,527,600 | Rp48,870,900 | Rp45,897,200 | Rp49,800,700 |
| Indirect Labor | Rp214,798,740 | Rp165,229,800 | Rp280,890,660 | Rp247,844,700 | Rp396,551,520 | Rp346,982,580 |
| PemeliharaanPerbaikanMesin | Rp50,112,150 | Rp48,716,890 | Rp52,112,650 | Rp50,275,600 | Rp57,216,000 | Rp53,187,000 |
| Machine Depreciation | Rp18,987,611 | Rp16,980,950 | Rp20,055,170 | Rp19,170,600 | Rp24,145,800 | Rp20,170,600 |
| Wisting(20% from Raw Material) | Rp2,005,451,466 | Rp2,252,469,419 | Rp2,024,692,648 | Rp2,196,098,533 | Rp1,893,166,185 | Rp2,165,415,923 |
| Wastewater Treatment Plant | Rp36,211,456 | Rp36,540,312 | Rp38,251,211 | Rp34,875,400 | Rp40,821,000 | Rp36,987,000 |
| Property Tax | Rp2,198,200 | Rp2,145,190 | Rp2,286,500 | Rp2,017,500 | Rp3,228,000 | Rp2,824,500 |
| Factory Depreciation | Rp23,976,800 | Rp19,386,500 | Rp25,211,450 | Rp21,245,800 | Rp27,430,900 | Rp25,325,420 |
| Factory Electricity | Rp128,031,696 | Rp98,485,920 | Rp167,426,064 | Rp147,728,880 | Rp36,366,208 | Rp206,820,432 |
| Factory Water | Rp68,088,904 | Rp52,376,080 | Rp89,039,336 | Rp78,564,120 | Rp25,702,592 | Rp109,989,768 |
| Telephone | Rp13,678,193 | Rp10,521,687 | Rp17,886,868 | Rp15,782,531 | Rp25,252,049 | Rp22,095,543 |
| Vehicle Maintenance | Rp31,435,670 | Rp29,856,700 | Rp35,761,400 | Rp33,217,650 | Rp37,814,700 | Rp35,911,300 |
| Vehicle Depreciation | Rp32,423,500 | Rp29,879,850 | Rp37,245,780 | Rp33,421,160 | Rp42,453,000 | Rp39,876,200 |
| Equipment and Supplies | Rp5,567,800 | Rp5,112,560 | Rp5,219,870 | Rp4,870,200 | Rp7,243,500 | Rp7,723,000 |
| Jagrag (PenyangaMarmer) | Rp39,265,700 | Rp42,380,900 | Rp36,780,900 | Rp32,398,420 | Rp42,850,000 | Rp39,761,800 |
| Marble Maintenance | Rp38,691,100 | Rp41,267,800 | Rp25,230,800 | Rp22,460,800 | | |
| Other Overhead | Rp57,214,500 | Rp57,089,700 | Rp58,265,550 | Rp54,378,900 | Rp67,987,200 | Rp66,708,000 |
| Total Overhead of Factory | Rp3,078,920,358 | Rp3,245,078,828 | Rp3,144,590,334 | Rp3,230,981,204 | Rp2,259,804,004 | Rp3,417,268,166 |
| Cost of Production | Rp13,216,812,890 | Rp14,592,529,920 | Rp13,412,730,372 | Rp14,339,129,868 | Rp2,929,884,529 | Rp14,123,066,178 |
| Volume of Production | 1.745 m2 | 1.771 m2 | 3.136 m2 | 2.948 m2 | 27.989 m2 | 21.611 m2 |
| Cost of Production/m2 | Rp7574105/m2 | Rp8239712/m2 | Rp4277019/m2 | Rp4864020/m2 | Rp461963/m2 | Rp667395/m2 |

As it can be seen in Table 2, the cost of goods sales of PT MSG does not look proportional. It happens because the company only uses cost driver which is production volume to divide the total costs. This is less proper for some of the cost elements should be used as a cost driver; such as indirect labor costs, machinery depreciation costs, property taxes, and other similar fees. This occurs cost of distortion. Adjustment of the traditional method can give benefit for the growth of the company. Activity-based costing can be used to correct the distortion cost which occurs by the conventional method.

Table 3 Calculation Pool Rate per Products

| Overhead Pabrik | Juvertine | Empire Beige | Total Biaya T+E | Opera Vaticano | Golden Venetino | Total Biaya O+G | Statuario | Peters Gold | Total Biaya S + P |
|---|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|-------------------|
| Total Biaya 1 (berkubungan dengan volume produksi) | | | | | | | | | |
| Lab Marmer | | | | | | | Rp 58.216.400 | Rp 62.111.900 | Rp 120.328.300 |
| Figuran | | | | | | | Rp 33.218.450 | Rp 39.867.800 | Rp 73.086.250 |
| Nemang | Rp 54.927.450 | Rp 51.254.800 | Rp 106.182.250 | Rp 52.711.980 | Rp 50.867.400 | Rp 103.579.380 | Rp 50.916.812 | Rp 49.800.350 | Rp 100.717.162 |
| Epoxy | Rp 43.849.000 | Rp 47.980.800 | Rp 91.829.800 | Rp 44.219.800 | Rp 49.990.750 | Rp 94.210.550 | Rp 43.672.450 | Rp 48.679.800 | Rp 92.352.250 |
| Resin | Rp 62.914.700 | Rp 60.509.200 | Rp 123.423.900 | Rp 62.876.500 | Rp 61.411.250 | Rp 124.287.750 | Rp 62.234.560 | Rp 61.960.800 | Rp 124.195.360 |
| Batu Kupas | Rp 23.987.000 | Rp 27.943.800 | Rp 51.930.800 | Rp 22.897.650 | Rp 25.490.110 | Rp 48.387.760 | Rp 21.960.800 | Rp 24.356.800 | Rp 46.317.600 |
| Coating | Rp 45.897.200 | Rp 49.800.700 | Rp 95.697.900 | Rp 45.527.600 | Rp 45.870.900 | Rp 94.398.500 | Rp 42.567.400 | Rp 49.861.120 | Rp 92.428.520 |
| Wisting (20% dari bahan Batu) | Rp1.893.166.185 | Rp2.165.415.923 | Rp4.058.582.108 | Rp2.024.692.648 | Rp 2.196.089.333 | Rp 4.220.782.181 | Rp 2.005.451.400 | Rp2.252.469.419 | Rp4.257.920.885 |
| Pengolahan Limbah Pabrik | Rp 40.821.000 | Rp 36.987.000 | Rp 77.808.000 | Rp 38.251.211 | Rp 34.875.400 | Rp 73.126.611 | Rp 36.211.456 | Rp 36.540.312 | Rp 72.751.768 |
| Mesin Genggam | Rp 45.523.848 | Rp 42.334.712 | Rp 87.858.560 | Rp 34.164.473 | Rp 32.383.400 | Rp 66.547.873 | Rp 19.415.688 | Rp 19.083.077 | Rp 38.498.765 |
| Mesin wire | Rp 9.000.034 | Rp 7.973.456 | Rp 16.973.470 | Rp 2.535.445 | Rp 1.279.235 | Rp 3.814.680 | Rp 1.202.701 | Rp 984.035 | Rp 2.186.736 |
| Mesin Polish | Rp 7.693.814 | Rp 4.570.266 | Rp 12.264.080 | Rp 4.023.528 | Rp 3.411.300 | Rp 7.434.828 | Rp 3.583.358 | Rp 2.743.383 | Rp 6.331.741 |
| Mesin SEI | Rp 5.248.156 | Rp 4.985.745 | Rp 10.233.901 | Rp 4.634.711 | Rp 2.888.785 | Rp 7.523.496 | Rp 2.789.802 | Rp 1.968.070 | Rp 4.757.872 |
| Mesin Hooded | Rp 3.308.925 | Rp 3.077.651 | Rp 6.386.576 | Rp 2.865.504 | Rp 1.847.782 | Rp 4.713.286 | Rp 1.635.439 | Rp 1.084.738 | Rp 2.720.177 |
| Mesin Pompa Limbah | Rp 1.484.610 | Rp 1.454.176 | Rp 2.938.786 | Rp 1.464.476 | Rp 1.137.094 | Rp 2.601.570 | Rp 1.130.482 | Rp 883.629 | Rp 2.016.111 |
| Mesin Meja Transfer | Rp 2.067.496 | Rp 1.809.059 | Rp 3.876.555 | Rp 2.067.496 | Rp 1.292.185 | Rp 2.756.661 | Rp 1.119.594 | Rp 861.457 | Rp 1.981.351 |
| Mesin Gantry Crane | Rp 1.312.102 | Rp 1.148.089 | Rp 2.460.191 | Rp 929.405 | Rp 820.064 | Rp 1.749.469 | Rp 710.722 | Rp 546.709 | Rp 1.257.431 |
| Mesin Genggam | Rp 10.559.068 | Rp 10.025.066 | Rp 20.584.134 | Rp 11.975.336 | Rp 11.315.833 | Rp 23.291.169 | Rp 10.996.059 | Rp 9.802.303 | Rp 20.798.362 |
| Mesin wire | Rp 1.170.162 | Rp 1.128.998 | Rp 2.299.160 | Rp 1.072.523 | Rp 997.223 | Rp 2.069.746 | Rp 920.166 | Rp 875.865 | Rp 1.796.031 |
| Mesin Polish | Rp 5.056.897 | Rp 4.842.167 | Rp 9.899.064 | Rp 3.827.876 | Rp 3.709.655 | Rp 7.537.531 | Rp 3.013.577 | Rp 2.319.204 | Rp 5.333.481 |
| Mesin SEI | Rp 4.863.502 | Rp 4.533.642 | Rp 9.417.144 | Rp 2.969.205 | Rp 2.553.423 | Rp 5.522.628 | Rp 2.365.424 | Rp 2.311.961 | Rp 4.677.385 |
| Mesin Hooded | Rp 2.922.644 | Rp 2.646.921 | Rp 5.569.565 | Rp 2.456.161 | Rp 2.056.443 | Rp 4.512.604 | Rp 1.994.908 | Rp 1.947.886 | Rp 3.932.794 |
| Mesin Pompa Limbah | Rp 1.690.109 | Rp 1.404.847 | Rp 3.094.956 | Rp 1.266.044 | Rp 1.237.556 | Rp 2.503.600 | Rp 1.093.031 | Rp 1.145.062 | Rp 2.238.093 |
| Telepon | Rp 25.252.049 | Rp 22.095.543 | Rp 47.347.592 | Rp 17.886.868 | Rp 15.782.531 | Rp 33.669.399 | Rp 13.678.193 | Rp 10.521.687 | Rp 24.199.880 |
| Peralatan dan Perlengkapan Jagrak (Penyangga Marmer) | Rp 7.243.500 | Rp 7.723.000 | Rp 14.966.500 | Rp 5.219.870 | Rp 4.870.200 | Rp 10.090.070 | Rp 5.567.800 | Rp 5.112.560 | Rp 10.680.360 |
| Pemeliharaan Marmer | | | | Rp 25.230.800 | Rp 22.460.800 | Rp 47.691.600 | Rp 38.691.100 | Rp 41.267.800 | Rp 79.958.900 |
| Overhead Lain-Lain | Rp 67.987.200 | Rp 66.708.000 | Rp 134.695.200 | Rp 58.265.550 | Rp 54.378.900 | Rp 112.644.450 | Rp 57.214.500 | Rp 57.089.700 | Rp 114.304.200 |
| Total Biaya yang Berkubungan Dengan Volume Produksi | Rp2.410.746.651 | Rp2.668.135.141 | Rp5.078.881.792 | Rp2.510.148.120 | Rp2.664.416.172 | Rp 5.174.564.292 | Rp 2.558.116.318 | Rp 2.826.498.047 | Rp 584.614.365 |
| Volume Produksi | Rp 27.989 | Rp 21.611 | Rp 49.600 | Rp 3.136 | Rp 2.948 | Rp 6.084 | Rp 1.745 | Rp 1.771 | Rp 3.516 |
| Total Biaya 1 (berkubungan dengan volume produksi) | | | Rp 102.397 | | | Rp 850.520 | | | Rp 1.531.460 |
| Total Biaya 2 (berkubungan dengan Luas Pabrik) | | | | | | | | | |
| Pajak Bumi dan Bangunan | Rp 3.228.000 | Rp 2.824.500 | Rp 6.052.500 | Rp 2.286.500 | Rp 2.017.500 | Rp 4.304.000 | Rp 2.198.200 | Rp 2.145.190 | Rp 4.343.390 |
| Penyusutan Pabrik | Rp 27.430.900 | Rp 25.325.420 | Rp 52.756.320 | Rp 25.211.450 | Rp 21.245.800 | Rp 46.457.250 | Rp 23.976.800 | Rp 19.386.500 | Rp 43.363.300 |
| Limbah Pabrik | Rp 160.777.224 | Rp 130.467.293 | Rp 300.244.522 | Rp 115.406.411 | Rp 102.668.994 | Rp 218.075.405 | Rp 96.443.610 | Rp 70.323.822 | Rp 166.767.432 |
| Air Pabrik | Rp 99.440.211 | Rp 85.388.129 | Rp 184.828.340 | Rp 65.472.193 | Rp 56.693.988 | Rp 122.166.181 | Rp 50.427.759 | Rp 36.061.079 | Rp 86.422.838 |
| Total Biaya yang Berkubungan Dengan Luas Pabrik | Rp 290.876.335 | Rp 253.005.347 | Rp 543.881.662 | Rp 208.376.554 | Rp 182.626.282 | Rp 391.002.836 | Rp 173.046.369 | Rp 127.916.591 | Rp 300.962.960 |
| Total Biaya 2 (berkubungan dengan luas Pabrik) | Rp 2.880 | Rp 2.520 | Rp 5.400 | Rp 2.040 | Rp 1.800 | Rp 3.840 | Rp 1.560 | Rp 1.200 | Rp 2.760 |
| Total Biaya 3 (berkubungan dengan jumlah Pengiriman) | | | | | | | | | |
| Pemeliharaan Kendaraan | Rp 37.814.700 | Rp 35.911.300 | Rp 73.726.000 | Rp 35.761.400 | Rp 33.217.650 | Rp 68.979.050 | Rp 31.435.670 | Rp 29.856.700 | Rp 61.292.370 |
| Penyusutan Kendaraan | Rp 42.453.000 | Rp 39.876.200 | Rp 82.329.200 | Rp 37.245.780 | Rp 33.421.160 | Rp 70.666.940 | Rp 32.423.500 | Rp 29.879.850 | Rp 62.303.350 |

Table 3 Calculation Pool Rate per Products (continued)

| Overhead Pabrik | Travertine | Empire Beige | Total Biaya T+E | Opera Vaticano | Golden Venetian | Total Biaya O+G | Statuario | Potero Gold | Total Biaya S + P |
|---|---------------|----------------|-----------------|----------------|-----------------|-----------------|----------------|----------------|-------------------|
| Total Biaya yang Berhubungan Dengan Jumlah Pengiriman | Rp 80.267.700 | Rp 75.787.500 | Rp 156.055.200 | Rp 73.007.180 | Rp 66.638.810 | Rp 139.645.990 | Rp 63.589.170 | Rp 59.736.550 | Rp 112.595.720 |
| Jumlah Pengiriman | Rp 25.750 | Rp 19.018 | Rp 44.768 | Rp 2.101 | Rp 1.592 | Rp 3.696 | Rp 750 | Rp 567 | Rp 1.317 |
| Total Biaya 3 (berhubungan dengan jumlah pengiriman) | | | Rp 3.486 | | | Rp 37.814 | | | Rp 93.846 |
| Total Biaya 4 (berhubungan dengan jam tenaga kerja langsung) | | | | | | | | | |
| Tenaga Kerja Tidak Langsung | Rp396.551.520 | Rp 346.982.580 | Rp 743.534.100 | Rp 280.890.660 | Rp 247.844.700 | Rp 528.735.360 | Rp 214.798.740 | Rp 165.889.800 | Rp 380.028.540 |
| Total Biaya yang Berhubungan Dengan jam Tenaga Kerja Langsung | Rp396.551.520 | Rp 346.982.580 | Rp 743.534.100 | Rp 280.890.660 | Rp 247.844.700 | Rp 528.735.360 | Rp 214.798.740 | Rp 165.889.800 | Rp 380.028.540 |
| Jam Tenaga Kerja Langsung | Rp 11.052 | Rp 10.584 | Rp 21.636 | Rp 9.837 | Rp 9.404 | Rp 19.241 | Rp 8.849 | Rp 8.380 | Rp 17.229 |
| Total Biaya 4 (berhubungan dengan jam tenaga kerja langsung) | | | Rp 34.366 | | | Rp 27.480 | | | Rp 22.057 |
| Total Biaya 5 (berhubungan dengan mesin) | | | | | | | | | |
| Pemeliharaan dan Perbaikan Mesin | Rp 57.216.000 | Rp 53.187.000 | Rp 110.403.000 | Rp 52.112.650 | Rp 50.275.600 | Rp 102.388.250 | Rp 50.112.150 | Rp 48.176.890 | Rp 98.829.040 |
| Penyusutan Mesin | Rp 2.145.800 | Rp 20.170.600 | Rp 22.316.400 | Rp 20.055.170 | Rp 19.170.600 | Rp 22.316.400 | Rp 18.987.611 | Rp 16.980.950 | Rp 35.968.561 |
| Total Biaya yang Berhubungan Dengan jam Mesin | Rp 59.361.800 | Rp 73.357.600 | Rp 132.719.400 | Rp 72.167.820 | Rp 69.446.200 | Rp 141.614.020 | Rp 69.099.761 | Rp 65.697.840 | Rp 134.797.601 |
| Jam Mesin | Rp 13.991 | Rp 12.242 | Rp 26.233 | Rp 9.910 | Rp 8.744 | Rp 18.654 | Rp 7.578 | Rp 5.830 | Rp 13.408 |
| Total Biaya 5 (berhubungan dengan jam mesin) | | | Rp 5.059 | | | Rp 7.592 | | | Rp 10.054 |

Calculation of overhead costs by cost categories, it is starting with counting the pool rate = total overhead cost: cost driver.

Table 4 Production Cost of Activity Based Costing System of Common Marble Type

| Marmer Common : Travertine | | | | Marmer Common : Empire Beige | | | |
|---------------------------------|---|---------------------------------------|------------------|---------------------------------|---|---------------------------------------|-------------------|
| Perhitungan overhead Kelompok 1 | | | | Perhitungan overhead Kelompok 1 | | | |
| Pool Rate Rp102.397 | x | Volume Produksi 27989 | = Rp.865.984.324 | Cost Driver Rp102.397.00 | x | Volume Produksi 21611 | = Rp2.212.897.468 |
| Perhitungan overhead Kelompok 2 | | | | Perhitungan overhead Kelompok 2 | | | |
| Pool Rate Rp100.719 | x | Luas Pabrik 2880 | = Rp290.070.230 | Cost Driver Rp100.719 | x | Luas Pabrik 2520 | = Rp253.811.452 |
| Perhitungan overhead Kelompok 3 | | | | Perhitungan overhead Kelompok 3 | | | |
| Pool Rate Rp3.486 | x | Jumlah Pengiriman 25750 | = Rp89.761.021 | Cost Driver Rp3.486 | x | Jumlah Pengiriman 19018 | = Rp66.294.179 |
| Perhitungan overhead Kelompok 4 | | | | Perhitungan overhead Kelompok 4 | | | |
| Pool Rate Rp34.366 | x | Jam Tenaga Kerja Langsung 11052 | = Rp379.808.600 | Cost Driver Rp34.3666 | x | Jam Tenaga Kerja Langsung 10584 | = Rp363.725.500 |
| Perhitungan overhead Kelompok 5 | | | | Perhitungan overhead Kelompok 5 | | | |
| Pool Rate Rp5.059 | x | Jam Mesin 13991 | = Rp70.784.017 | Cost Driver Rp5.059 | x | Jam Mesin 12242 | = Rp61.935.583 |
| Total Overhead Pabrik | | | Rp3.696.408.193 | Total Overhead Pabrik | | | Rp2.958.663.981 |

Based on Table 2, Table 3, and Table 4, it is known that the company is still using conventional methods. An overview of the amount of the production cost of each species using the calculations made by the company is as follows (1) Common marble type consists of Travertine =

Rp461.963/m² and Empire Beige = Rp667.395/m². (2) Limited marble type consists of Opera Vaticano = Rp4.277.019/m² and Golden Venatino = Rp4.86402 million/m². (3) Exotic marble type consists of Statuario = Rp7.574.105/m² and Potoro Gold = Rp8.239.712/m².

Table 5 Production Cost of Activity Based Costing Common Type

| Production Cost of Activity Based Costing of Common Marble Type | | |
|--|--------------------------|--------------------------|
| | Travertine | Empire Beige |
| Direct Cost Production | Rp9.468.830.925 | Rp10.827.079.613 |
| Total of Direct Labor | Rp204.249.600 | Rp178.718.400 |
| Total of Overhead | Rp3.696.408.193 | Rp2.958.663.981 |
| Production Cost | Rp13.369.488.718 | Rp13.964.461.994 |
| Production Volume | 27.989 m ² | 21.611 m ² |
| Production Cost/m ² | Rp477.669/m ² | Rp646.174/m ² |

Table 6 Production Cost of Activity Based Costing System of Limited Marble Type

| Marmar Limited : Opera Vaticano | | | | Marmar Limited : Golden Venatino | | | |
|--|---|--------------------------------------|------------------|---|---|--------------------------------------|-------------------|
| Perhitungan overhead Kelompk 1 | | | | Perhitungan overhead Kelompk 1 | | | |
| Pool Rate Rp850.520 | x | Volume Produksi 3136 | = Rp.2.667231035 | Pool Rate Rp850.520 | x | Volume Produksi 2984 | = Rp2.537.951.980 |
| Perhitungan overhead Kelompk 2 | | | | Perhitungan overhead Kelompk 2 | | | |
| Pool Rate Rp101.824 | x | Luas Pabrik 2040 | = Rp207.720.257 | Pool Rate Rp101.824 | x | Luas Pabrik 1800 | = Rp183.282.579 |
| Perhitungan overhead Kelompk 3 | | | | Perhitungan overhead Kelompk 3 | | | |
| Pool Rate Rp37.814 | x | Jumlah Pengiriman 2101 | = Rp79.446.581 | Pool Rate Rp37.814 | x | Jumlah Pengiriman 1592 | = Rp60.199.409 |
| Perhitungan overhead Kelompk 4 | | | | Perhitungan overhead Kelompk 4 | | | |
| Pool Rate Rp27.480 | x | Jam Tenaga Kerja Langsung 9837 | = Rp270.317.018 | Pool Rate Rp27.480 | x | Jam Tenaga Kerja Langsung 9404 | = Rp258.418.342 |
| Perhitungan overhead Kelompk 5 | | | | Perhitungan overhead Kelompk 5 | | | |
| Pool Rate Rp7.592 | x | Jam Mesin 9910 | = Rp75.232.923 | Pool Rate Rp7.592 | x | Jam Mesin 8744 | = Rp66.381.097 |
| Total Overhead Pabrik | | | Rp3.299.947.814 | Total Overhead Pabrik | | | Rp3.106.233.408 |

Table 7 Production Cost of Activity Based Costing

| Production Cost of Activity Based Costing | | |
|--|----------------------------|----------------------------|
| | Opera Vaticano | Golden Venatino |
| Direct Cost Production | Rp10.123.463.238 | Rp10.980.492.664 |
| Total of Direct Labor | Rp144.676.800 | Rp127.656.000 |
| Total of Overhead | Rp3.299.947.814 | Rp3.106.233.408 |
| Production Cost | Rp13.568.087.852 | Rp14.214.382.072 |
| Production Volume | 3.136 m ² | 2.948 m ² |
| Production Cost/m ² | Rp4.326.559/m ² | Rp4.821.704/m ² |

Table 8 Production Cost of Activity Based Costing System of Exotic Marble Type

| Marmer Exotic : Statuario | | | | Marmer Exotic : Potoro Gold | | | |
|---------------------------------------|---|-----------------------------------|-------------------|---------------------------------------|---|-----------------------------------|-------------------|
| Perhitungan overhead Kelompk 1 | | | | Perhitungan overhead Kelompk 1 | | | |
| Pool Rate Rp1.531.460 | x | Volume Produksi 1745 | = Rp2.672.398.199 | Pool Rate Rp1.531.460 | x | Volume Produksi 1771 | = Rp2.712.216.166 |
| Perhitungan overhead Kelompk 2 | | | | Perhitungan overhead Kelompk 2 | | | |
| Pool Rate Rp109.045 | x | Luas Pabrik 1560 | = Rp170.109.466 | Pool Rate Rp109.045 | x | Luas Pabrik 1200 | = Rp130.853.461 |
| Perhitungan overhead Kelompk 3 | | | | Perhitungan overhead Kelompk 3 | | | |
| Pool Rate Rp93.846 | x | Jumlah Pengiriman 750 | = Rp170.109.499 | Pool Rate Rp109.045 | x | Jumlah Pengiriman 567 | = Rp53.210.914 |
| Perhitungan overhead Kelompk 4 | | | | Perhitungan overhead Kelompk 4 | | | |
| Pool Rate Rp22.057 | x | Jam Tenaga Kerja Langsung 8849 | = Rp195.186.752 | Pool Rate Rp22.057 | x | Jam Tenaga Kerja Langsung 8380 | = Rp184.841.788 |
| Perhitungan overhead Kelompk 5 | | | | Perhitungan overhead Kelompk 5 | | | |
| Pool Rate Rp10.054 | x | Jam Mesin 7578 | = Rp76.185.577 | Pool Rate Rp10.054 | x | Jam Mesin 5830 | = Rp58.612.024 |
| Total Overhead Pabrik | | | Rp3.184.264.834 | Total Overhead Pabrik | | | Rp3.139.734.352 |

Table 9 Production Cost of Activity Based Costing

| Production Cost of Activity Based Costing | | |
|---|----------------------------|----------------------------|
| | Statuario | Potoro Gold |
| Direct Cost Production | Rp10.027.257.332 | Rp11.262.347.093 |
| Total of Direct Labor | Rp110.635.200 | Rp85.104.000 |
| Total of Overhead | Rp3.184.264.234 | Rp3.193.734.352 |
| Production Cost | Rp13.322.157.366 | Rp13.139.734.352 |
| Production Volume | 1745 m ² | 1.771 m ² |
| Production Cost/m ² | Rp7.634.474/m ² | Rp8.180.229/m ² |

Table 10 Reconciliation of Production Cost

| Sistem Yang digunakan Perusahaan | Volume Produksi | Total | Sistem Activity Based Costing | Volume Produksi | Total | Selisih Antar Sistem | Keterangan | | |
|----------------------------------|-----------------|-------|-------------------------------|-----------------|-------|----------------------|-------------------------|----------------------|--------------------|
| Jenis Common | | | | | | | | | |
| Travertine | | | | | | | | | |
| Rp462.070 | x | 27989 | Rp12.932.877.230 | Rp477.669 | x | 27989 | Rp13.369.477.641 | Rp(436.600.411) | Understated |
| Empire Beige | | | | | | | | | |
| Rp667.395 | x | 21611 | Rp14.423.073.345 | Rp646.174 | x | 21611 | Rp13.964.466.314 | Rp458.607.031 | Overstated |
| Jenis Limited | | | | | | | | | |
| Opera Vaticano | | | | | | | | | |
| Rp4.277.019 | x | 3136 | Rp13.412.731.584 | Rp4.326.559 | x | 3136 | Rp13.568.089.024 | Rp(155.357.440) | Understated |
| Golden Venatino | | | | | | | | | |
| Rp4.864020 | x | 2948 | Rp14.339.130.960 | Rp4.821.704 | x | 2948 | Rp14.214.383.392 | Rp124.747.568 | Overstated |
| Jenis Exotic | | | | | | | | | |
| Statuario | | | | | | | | | |
| Rp7.574.105 | x | 1745 | Rp13.216.813.225 | Rp7.634.474 | x | 1745 | Rp13.322.157.130 | Rp(105.343.905) | Understated |
| Potoro Gold | | | | | | | | | |
| Rp8.239.712 | x | 1771 | Rp14.592.529.952 | Rp8.180.229 | x | 1771 | Rp14.487.185.559 | Rp105.344.393 | Overstated |
| Total | | | Rp82.917.156.296 | Total | | | Rp82.925.759.060 | Rp(8.602.764) | Understated |
| Statuario | | | | | | | | | |
| Rp7.574.105 | x | 1745 | Rp13.216.813.225 | Rp7.634.474 | x | 1745 | Rp13.322.157.130 | Rp(105.343.905) | Understated |
| Potoro Gold | | | | | | | | | |
| Rp8.239.712 | x | 1771 | Rp14.592.529.952 | Rp8.180.229 | x | 1771 | Rp14.487.185.559 | Rp105.344.393 | Overstated |
| Total | | | Rp82.917.156.296 | Total | | | Rp82.925.759.060 | Rp(8.602.764) | Understated |

CONCLUSIONS

There are several conclusions that can be drawn from the research that has been done. First, PT Mulia Sejati Gallery is an import-export company engaged in the manufacture of mining processing of natural stone marble, granite, onyx, and other kinds of that. Second, PT Mulia Sejati Gallery is still using conventional measuring systems. The cost of production of marble that is being discussed in this research is Rp12.932.877.230 and Rp14.423.073.345 each for common travertine and common empire beige. While the cost of production for limited types are limited opera vaticano Rp13.412.731.584 and limited golden venatino Rp14.33996 million. For the limited kind is Rp13.216.813.225 and Rp14.592.952 each for statuario and potoro gold. Third, if the system uses activity based costing in determining the cost of production, then the amount of the cost of production on each type is common travertine Rp13.369.477.641, common empire beige Rp13.964.466.314, limited opera vaticano Rp13.568.089.024, limited golden venatino Rp14.214.747.568, exotic statuario Rp13.322.157.130, exotic potoro gold Rp14.487.185.559. Fourth, by calculating the difference, the disparity of the cost of production of both systems are understated and occurs in three types of marble, namely common travertine Rp436.600.411, limited opera vaticano Rp155.357.440, and exotic statuario Rp105.343.905. Fifth, there is excess recording or overstated within the type of common empire beige Rp458.607.031. Limited opera vaticano Rp124.747.568, exotic potoro gold Rp105.344.393. Sixth, the overall cost of production used by the company is too low or understated with the amount of Rp8.602.764.

Some suggestions that can be recommended for PT Mulia Sejati Gallery include (1) after overall analysis, there is a recording that is too low and too high on the determination of cost of production. This should be evaluated immediately to sustain the company. (2) PT Mulia Sejati Gallery is advised to review the production cost calculation system that is currently used. (3) PT Mulia Sejati Gallery is advised to use the system to calculate the cost of production by using the activity-based costing system. (4) Training and in-depth understanding of marble are needed to be done for some employees who work directly in the production process for the sake of wasting reduction on raw materials.

REFERENCES

- Atkinson, A. A., Robert, S. K., & Ella, M. M. (2012). *Akuntansi Manajemen* (5th ed.). Terjemahan Oleh Takziyah, N. M. Jakarta: Index.
- Carter K. W. (2009). *Akuntansi Biaya Buku 1* (14th ed.). Terjemahan Oleh Krista. Jakarta: Salemba Empat.
- Dunia, A. F., & Wasillah, A. (2012). *Akuntansi Biaya* (3rd ed.). Jakarta: Salemba Empat.
- Garrison, R. H., Noreen, E. W., & Brewer, P. C. (2013). *Akuntansi Manajerial* (14th ed.). Jakarta: Salemba Empat.
- Godil, D. I. (2013). Application Of Activity Based Costing In A Textile Company Of Pakistan - A Case Study. *Interdisiplinary Journal of Contemporary Research in Business*, 4(11), 80-93.
- Hansen, D. R., & Maryanne, M. M. (2007). *Akuntansi Manajemen* (7th ed.). Terjemahan Oleh Dewi Itriani. Jakarta: Salemba Empat.

- Horngren, C. T., Srikant, Linda, S. B., M. D., George, F., Walter T. H., Madhav, R., & Christtoper I. (2007). *Akuntansi* (5th ed.). Terjemahan Oleh Amir Abdul Yusuf. Jakarta: Index.
- Weygandt, J. J., Paul, D. K., & Donald, E. K. (2010). *Accounting Principles* (11th ed.). New Jersey: Wiley.
- Witjaksono, A. (2006). *Akuntansi Biaya* (1st ed.). Yogyakarta: Graha Ilmu.